

SECTION-1: Identification of the substance / mixture and the company / undertaking

Catalogue Number	CS-O-61975
Product Name	1,3,7,8-Tetrachlorodibenzodioxin
CAS No.	50585-46-1
Category	Building Blocks
Synonyms	1,3,7,8-tetrachlorodibenzo[b,e][1,4]dioxine
Brand	Clearsynth Labs Ltd.
Identified uses	Laboratory Chemicals
Uses advised against	Not available
Company	Clearsynth Labs Ltd. Mumbai, India
Emergency Phone #	+91-22-245045900
REACH No.	Not available

SECTION 2: Hazards identification

Disclaimer: This is sample MSDS. Please email sales@clearsynth.com for more details.

2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Not available

2.2 Label Elements

Signal Word: Not available

Not available

Hazard Statement(s)

Code	Statement
Not available	Not available

Precautionary Statement(s)

Code	Statement
Not available	Not available

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : 1,3,7,8-Tetrachlorodibenzodioxin
CAS Number : 50585-46-1
Molecular Formula : C₁₂H₄Cl₄O₂
Molecular Weight : 321.96
Parent Chemical : -
Synonyms : 1,3,7,8-tetrachlorodibenzo[b,e][1,4]dioxine
Concentration : Not available

SECTION 4: First aid measures

SECTION 4: First-aid measures

4.1 Description of first aid measures

- General advice: Remove contaminated clothing and shoes. Seek medical attention if symptoms occur or persist. Show this SDS to medical personnel.
- Inhalation: Move person to fresh air. Keep at rest. If breathing is difficult, seek medical attention.
- Skin contact: Wash with plenty of soap and water. Seek medical attention if irritation or other symptoms develop.
- Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention.
- Ingestion: Rinse mouth. Do not induce vomiting unless directed by medical personnel. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

- Not available.

4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically. No data available.

SECTION 5: Firefighting measures

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

- Suitable extinguishing media: Use extinguishing measures appropriate to surrounding fire (e.g., water spray, dry chemical, foam, carbon dioxide).
- Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture

- Hazardous combustion products: Hydrogen chloride; carbon oxides; chlorinated organic compounds. Other decomposition products: No data available.

5.3 Advice for firefighters

- Wear self-contained breathing apparatus (SCBA) and full protective gear.
- Avoid inhalation of combustion/decomposition fumes.
- Cool containers with water spray if exposed to fire.

SECTION 6: Accidental release measures

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6.1 Personal precautions, protective equipment and emergency procedures

- Evacuate unnecessary personnel.
- Avoid breathing dust/fumes. Avoid contact with skin and eyes.
- Use appropriate personal protective equipment (see Section 8).
- Ensure adequate ventilation.

6.2 Environmental precautions

- Prevent further leakage or spillage if safe to do so.
- Avoid release to the environment. Prevent entry into drains, surface waters, and soil.

6.3 Methods and material for containment and cleaning up

- Avoid generating dust.
- Collect spilled material using suitable methods (e.g., carefully sweep or use HEPA-filtered vacuum) and place in a suitable, labeled container for disposal.
- Clean contaminated area with appropriate cleaning methods. Do not flush to drain.

6.4 Reference to other sections

- See Section 8 for personal protective equipment and Section 13 for disposal considerations.

SECTION-7: Handling and storage

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Handle in accordance with good industrial hygiene and safety practice.
- Avoid breathing dust/fumes. Avoid contact with skin, eyes, and clothing.
- Use only with adequate ventilation; local exhaust recommended.
- Do not eat, drink, or smoke when using this product.
- Wash hands thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

- Store in tightly closed container in a cool, dry, well-ventilated place.
- Protect from moisture and incompatible materials.
- Incompatible materials: Not available.

7.3 Specific end use(s)

- Laboratory/research use. Not available for other specific uses.

SECTION 8: Exposure controls / personal protection

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

- Occupational exposure limits: Not available.
- Biological limit values: Not available.

8.2 Exposure controls

- Appropriate engineering controls: Use adequate general ventilation. Local exhaust ventilation recommended where dust or aerosols may be generated.

Personal protective equipment (PPE)

- Eye/face protection: Safety glasses with side shields or chemical splash goggles.
- Skin protection: Wear protective gloves and protective clothing suitable for chemical handling.

- Respiratory protection: If ventilation is inadequate or exposure is possible, use appropriate respiratory protection. Specific selection: Not available.
 - Hygiene measures: Wash hands after handling. Remove contaminated clothing and wash before reuse.
- Environmental exposure controls
- Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available
o) Relative Density	No data available

Property	Value
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

SECTION 10: Stability and reactivity

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10.1 Reactivity

- No data available.

10.2 Chemical stability

- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

- No data available.

10.4 Conditions to avoid

- Heat, flames, and sources of ignition: Not available.

- Other conditions: Avoid dust generation. Avoid incompatible materials.

10.5 Incompatible materials

- Not available.

10.6 Hazardous decomposition products

- Hydrogen chloride; carbon oxides; chlorinated organic compounds. Other decomposition products: No data available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

- Acute toxicity: No data available.

- Skin corrosion/irritation: No data available.

- Serious eye damage/eye irritation: No data available.

- Respiratory or skin sensitization: No data available.

- Germ cell mutagenicity: No data available.

- Carcinogenicity: No data available.

- Reproductive toxicity: Exposure to large amounts of CDDs causes chloracne, a severe skin disease with acne-like lesions that occur mainly on the face and upper body. CDDs may also cause liver damage and induce long-term alterations in glucose metabolism and subtle changes in hormonal levels. In addition, studies have shown that CDDs may disrupt the endocrine system and weaken the immune system, as well as cause reproductive damage and birth defects, central and peripheral nervous system pathology, thyroid disorders, endometriosis, and diabetes. (L177, L178)

- STOT-single exposure: No data available.

- STOT-repeated exposure: Exposure to large amounts of CDDs causes chloracne, a severe skin disease with acne-like lesions that occur mainly on the face and upper body. CDDs may also cause liver damage and induce long-term alterations in glucose metabolism and subtle changes in hormonal levels. In addition, studies have shown that CDDs may disrupt the endocrine system and weaken the immune system, as well as cause reproductive damage and birth defects, central and peripheral nervous system pathology, thyroid disorders, endometriosis, and

diabetes. (L177, L178)

- Aspiration hazard: No data available.

Likely routes of exposure

- No data available.

Symptoms related to the physical, chemical and toxicological characteristics

- CDDs cause their toxic effects by binding to the aryl hydrocarbon receptor and subsequently altering the transcription of certain genes. The affinity for the Ah receptor depends on the structure of the specific CDD. The change in gene expression may result from the direct interaction of the Ah receptor and its heterodimer-forming partner, the aryl hydrocarbon receptor nuclear translocator, with gene regulatory elements or the initiation of a phosphorylation/dephosphorylation cascade that subsequently activates other transcription factors. The affected genes include several oncogenes, growth factors, receptors, hormones, and drug-metabolizing enzymes. The change in transcription/translation of these genes is believed to be the cause of most of the toxic effects of CDDs. (L177)

SECTION 12: Ecological information

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12.1 Toxicity

- No data available.

12.2 Persistence and degradability

- No data available.

12.3 Bioaccumulative potential

- No data available.

12.4 Mobility in soil

- No data available.

12.5 Results of PBT and vPvB assessment

- Not available.

12.6 Endocrine disrupting properties

- Not available.

12.7 Other adverse effects

- No data available.

SECTION 13: Disposal considerations

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13.1 Waste treatment methods

- Dispose of contents/container in accordance with local/regional/national/international regulations.

- Do not discharge to drains or the environment.

- Waste classification: Not available.

- Contaminated packaging: Dispose of as unused product unless cleaned and decontaminated in accordance with applicable regulations.

SECTION 14: Transport information

SECTION 14: Transport information

- UN number: Not available.
- UN proper shipping name: Not available.
- Transport hazard class(es): Not available.
- Packing group: Not available.
- Environmental hazards: Not available.
- Special precautions for user: Not available.
- Transport in bulk according to IMO instruments: Not available.

Note: Transport classification may vary by mode and jurisdiction; consult current regulations and carrier requirements.

SECTION 15: Regulatory information

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15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- Regulatory inventories/status (e.g., TSCA, REACH, DSL, EINECS/ELINCS, ENCS, AICS, IECSC, KECI): Not available.
- Specific national/regional regulations: Not available.

15.2 Chemical safety assessment

- No data available.

SECTION 16: Other information

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Product identification

- Product name: 1,3,7,8-Tetrachlorodibenzodioxin
- Synonyms: 1,3,7,8-tetrachlorodibenzo[b,e][1,4]dioxine
- CAS No.: 50585-46-1
- Catalog No.: CS-O-61975
- Supplier: Clearsynth Labs Ltd., Mumbai, India
- Emergency phone: +91-22-245045900

Disclaimer

- The information provided is believed to be accurate based on available data; however, no warranty is expressed or implied. Users are responsible for determining suitability for their particular application and for compliance with applicable laws and regulations.

Revision information

- Revision date: Not available.
- Version: Not available.

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